

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 19-54 are pending in the present application. Claims 1-18 have been canceled and Claims 19-54 have been added by the present amendment.

In the outstanding Office Action, Claims 1-4, 6, 8, and 10-18 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-4, 6, 8, 10-18 were rejected under 35 U.S.C. § 101; and Claims 1, 2, 10, and 11-18 were rejected under 35 U.S.C. § 102(b) as anticipated by Park et al. (Journal of Molecular Biology, Vol. 284, 1998, pp. 1201-1210, herein "Park").

Regarding the outstanding rejections of the claims, Claims 1-18 have been canceled without prejudice, and thus, all these rejections are moot. However, new Claims 19-54 are discussed with regard to these rejections.

Regarding the rejection of Claims 1-4, 6, 8, and 10-18 under 35 U.S.C. § 112, second paragraph, new Claims 19-54 do not recite a "transaction condition" which was indicated by the Examiner as confusing. In addition, new Claims 19-54 clarify that a "relationship" between first and second homologous values is used to determine the similarity of the target data group. Accordingly, it is respectfully submitted that new Claims 19-54 comply with 35 U.S.C. § 112, second paragraph.

Regarding the rejection of Claims 1-4, 6, 8 and 10-18 under 35 U.S.C. § 101, new Claims 19-54 recite a homology analysis system that calculates a homology determination value $Z_i^{(1)}$ and this determination value indicates a similarity of a target data group to one of first data group and second data group, which is believed to be a tangible result as discussed next.

In this respect, it is noted that MPEP § 2106 IV. C. 2.b) indicates that "[a]n application of a law of nature or mathematical formula to a ... process may well be deserving

of patent protection.” Further, in the same paragraph, MPEP states that “[i]t is for the discovery or invention of some practical matter or means of producing a beneficial result or effect, that a patent is granted” Furthermore, the same paragraph of MPEP clarifies the meaning of the “tangible result” by stating that “the opposite meaning of ‘tangible’ is ‘abstract.’”

In other words, MPEP takes the position that a practical application that produces a tangible result qualifies under 35 U.S.C. § 101.

In the instant case, independent Claim 19 recites a system that calculates a determination value and based on this determination value an analysis target data is determined to be similar to a first data group or a second data group. Thus, Applicants respectfully submit that determining if the analysis target data is similar to one of the first and second data groups is not an “abstract” but rather a tangible result because based on the above-discussed determination, a set of genes is determined to be similar to another set of genes.

Accordingly, it is respectfully submitted that new Claims 19-54 include patentable subject matter under 35 U.S.C. § 101.

Regarding the rejection of Claims 1, 2, 10, and 11-18 under 35 U.S.C. § 102(b) as anticipated by Park, Applicants respectfully submit that new independent Claim 19 includes the subject matter of original Claim 3, which was not rejected under Park. Accordingly, at least for this reason, new Claim 19 and each of the claims depending therefrom patentably distinguish over Park.

In addition, Applicants note that new Claim 19 recites a homology analysis system that determines the presence/absence of a difference in the selected data by a t-test and also the presence/absence of a difference amount groups within a certain range of similarity, which are not disclosed by Park.

Accordingly, it is further respectfully submitted that independent Claim 19 and each of the claims depending therefrom patentably distinguish over Park.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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